We claim:

1. A polymeric particle comprising a pharmaceutically acceptable polymer core, a bioactive agent, and a surface-altering agent disposed on the surface of the core that renders the surface of the polymeric particle mucus resistant and/or enhances the average rate at which the particles or a fraction of the particles moves in mucus.
2. The polymeric particle of claim 1, wherein the bioactive agent is encapsulated in the polymer core.
3. The polymeric particle of claim 1, wherein the bioactive agent is disposed on the surface of the polymeric particle.
4. The polymeric particle of claim 1, wherein the bioactive agent is covalently coupled to the polymer core.
5. The polymeric particle of claim 1, wherein the pharmaceutically acceptable polymer is a poly(D,L-lactic-*co*-glycolic) acid, polyethylenimine, dioleyltrimethyanmoniumpropane/dioleyl-*sn*-glycerolphosphoethanolamine, poly(anhydrides), or a polymer formed from clinically approved monomers.
6. The polymeric particle of claim 5, wherein the clinically approved monomers are monomers of sebacic acid, 1,3-bis(carboxyphenoxy)propane, and/or PEG.
7. The polymeric particle of claim 1, wherein the bioactive agent is a therapeutic agent or an imaging agent.
8. The polymeric particle of claim 7, wherein the therapeutic agent is a DNA, an RNA, a small molecule, a peptidomimetic, or a protein.
9. The polymeric particle of claim 7, wherein the imaging agent is a diagnostic agent.
10. The polymeric particle of claim 7, wherein the imaging agent further comprises a detectable label.
11. The polymeric particle of claim 1 further comprising a targeting moiety.
12. The polymeric particle of claim 1 further comprising an adjuvant.
13. The polymeric particle of claim 1, wherein the surface-altering agent is a cationic surfactant.

14. The polymeric particle of claim 13, wherein the cationic surfactant is dimethyldioctadecylammonium bromide.

15. The polymeric particle of claim 1, wherein the surface-altering agent enhances hydrophilicity of the surface of the polymeric particle.

16. The polymeric particle of claim 15, wherein the surface-altering agent is polyethylene glycol.

17. The polymeric particle of claim 1, wherein the polymeric particle is less than 200 nm in diameter.

18. The polymeric particle of claim 1, wherein the polymeric particle passes through a mucosal barrier at a greater rate than a polystyrene particle of a similar size.

19. The polymeric particle of claim 1, wherein the bioactive agent is a DNA, and wherein the polymeric particle comprising the DNA transfects a cell more efficiently than naked DNA.

20. A polymeric particle comprising a pharmaceutically acceptable polymer core and a bioactive agent disposed on the surface of the particle, wherein the bioactive agent renders the surface of the polymeric particle mucus resistant.

21. A pharmaceutical composition comprising the polymeric particle of claim 1 or 16 and a pharmaceutically acceptable carrier.

22. An inhaler comprising the polymeric particle of claim 1 or 16.

23. A method for transfecting a cell comprising administering to the cell a polymeric particle of claim 1 or 16.

24. A method for treating, preventing, or diagnosing a condition in a patient, comprising administering to the patient a pharmaceutical composition of claim 17.

25. The method of claim 20, wherein the polymeric particle in the pharmaceutical composition passes through a mucosal barrier in the patient.